California High-Speed Rail Authority

RFP No.: HSR 13-57

Request for Proposal for Design-Build Services for Construction Package 2-3

Book I, Part C.4 – Scoping Typical Sections

WORK ELEMENTS (IN CONTRACT)

1. PREPARED SUBGRADE
2. PROTECTIVE LAYER (SEE NOTE 2)
3. FINISHED GRADE
4. FENCE AND FOUNDATION / INTRUSION BARRIER (SEE NOTE 3 & 4)
5. LOW VOLTAGE UNDER TRACK AND UNDER GROUND CONDUITS IN DUCTBANK AND MANHOLES
6. DRAINAGE DITCH
7. UTILITY CROSSINGS
8. TEMPORARY SURFACE DRAINAGE
9. 25KV UNDER GROUND CONDUITS IN DUCTBANK AND MANHOLES

WORK ELEMENTS (NOT IN CONTRACT)

1. SUBBALLAST
2. CONTACT WIRE
3. OCS ASSEMBLY
4. MESSENGER WIRE
5. NEGATIVE FEEDER WIRE
6. STATIC WIRE
7. OCS POLE AND FOUNDATION
8. TRACKFORM (SEE NOTE 5)
9. UNDERDRAIN
10. CABLE TROUGH
11. DRAIN AGGREGATE UNDER CABLE TROUGH WITH GEOFABRIC
12. INTERMITTENT DRAIN AGGREGATE LAYER
13. MAIN GANTRY

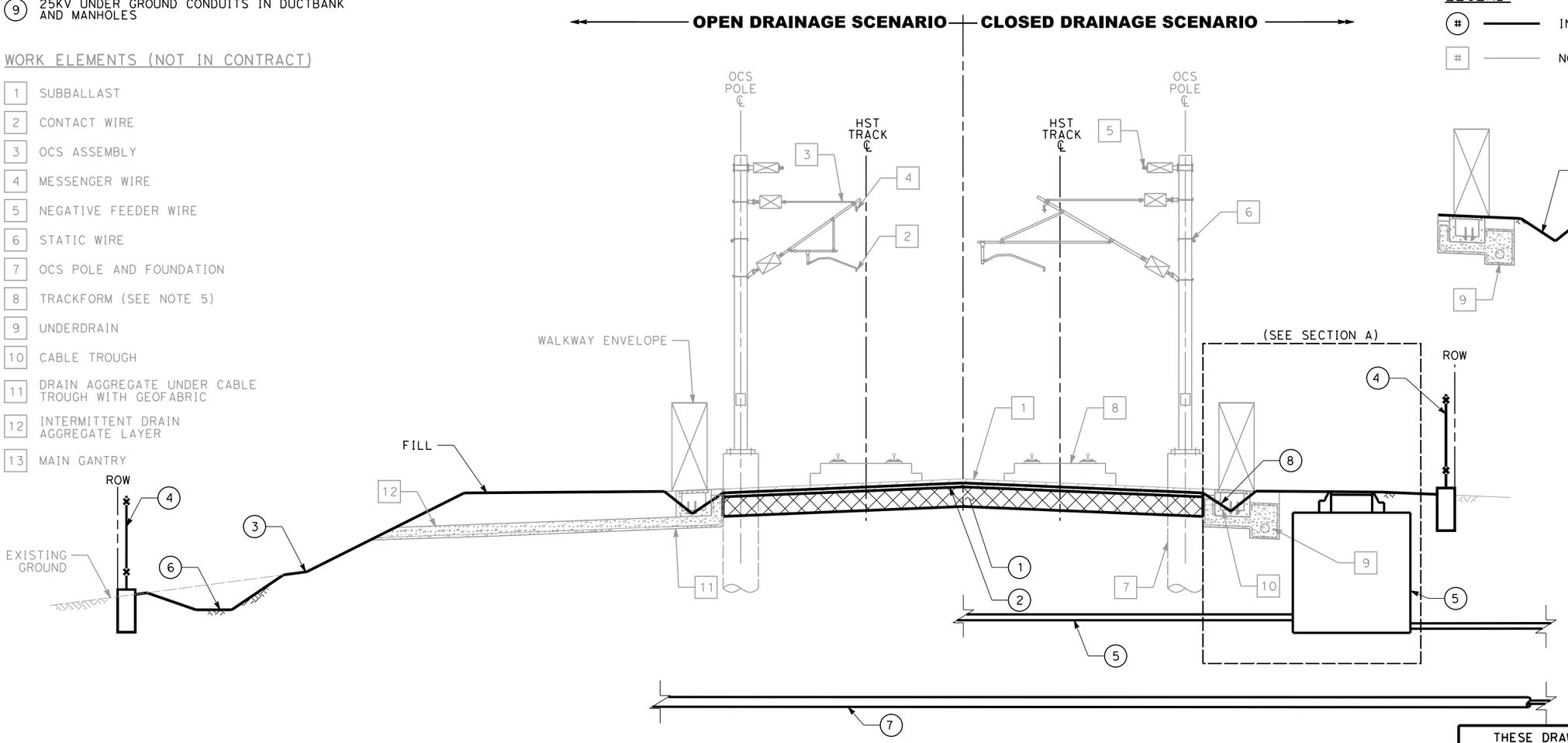
NOTES:

1. SEE DESIGN CRITERIA MANUAL, DIRECTIVE DRAWINGS, AND STANDARD DRAWINGS FOR REQUIREMENTS AND DIMENSIONS.
2. PROTECTIVE LAYER TO PROTECT PREPARED SUBGRADE.
3. INTRUSION BARRIER (AS REQUIRED) ADJACENT TO ROADWAYS AND RAILWAY.
4. FENCE GROUNDING SHALL BE PROVIDED.
5. NON-BALLASTED TRACKFORM SHOWN FOR ILLUSTRATION PURPOSES ONLY. SEE SCOPE OF WORK.
6. SEE SCOPE OF WORK - SCOPE ELEMENTS MATRIX FOR PRELIMINARY LOCATIONS AND DETAILS FOR 25KV UNDERGROUND CONDUITS IN DUCTBANK AND MANHOLES.

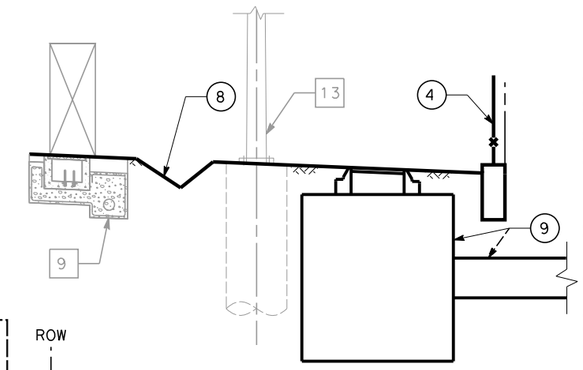
LEGEND:

(#) —— IN CONTRACT

[#] —— NOT IN CONTRACT



TYPICAL AT-GRADE SECTION



SECTION A
25KV DUCTBANK AND MANHOLES
(SEE NOTE 6)

DATE: 07/23/2014

THESE DRAWINGS ARE SOLELY FOR THE PURPOSE OF SCOPED WORK ELEMENTS AND ARE NOT INTENDED AS A DESIGN DIRECTIVE. TRACK, SYSTEMS, AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN. ACCORDINGLY THE INFORMATION CONTAINED HEREIN SHALL NOT BE USED FOR DESIGN AND\OR CONSTRUCTION PURPOSES. OTHERWISE, REFER TO SCOPE OF WORK AND TECHNICAL DIRECTIVES.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

PARSONS BRINCKERHOFF

CALIFORNIA HIGH-SPEED TRAIN PROJECT
ATTACHMENT 3 - SCOPING TYPICAL SECTIONS
AT-GRADE
OPEN AND CLOSED DRAINAGE SECTION
SOW-CP02-03_001

RFP No.: 13-57 – Addendum No. 4 - 09/09/2014

WORK ELEMENTS (IN CONTRACT)

1. PREPARED SUBGRADE
2. PROTECTIVE LAYER (SEE NOTE 3)
3. FINISHED GRADE
4. FENCE AND FOUNDATION / INTRUSION BARRIER (SEE NOTE 4 & 5)
5. FALL PROTECTION
6. GUTTER
7. UNDER TRACK CONDUITS IN DUCTBANK AND MANHOLES
8. DRAINAGE DITCH
9. CONTINUOUS DRAINAGE BLANKET
10. RETAINING STRUCTURE
11. WEEP HOLE
12. RETAINING WALL PERFORATED PIPE UNDERDRAIN
13. UTILITY CROSSINGS
14. TEMPORARY SURFACE DRAINAGE

WORK ELEMENTS (NOT IN CONTRACT)

1. SUBBALLAST
2. CONTACT WIRE
3. OCS ASSEMBLY
4. MESSENGER WIRE
5. NEGATIVE FEEDER WIRE
6. STATIC WIRE
7. OCS POLE AND FOUNDATION
8. TRACKFORM (SEE NOTE 6)
9. UNDERDRAIN (SEE NOTE 2)
10. CABLE TROUGH
11. DRAIN AGGREGATE UNDER CABLE TROUGH WITH GEOFABRIC.

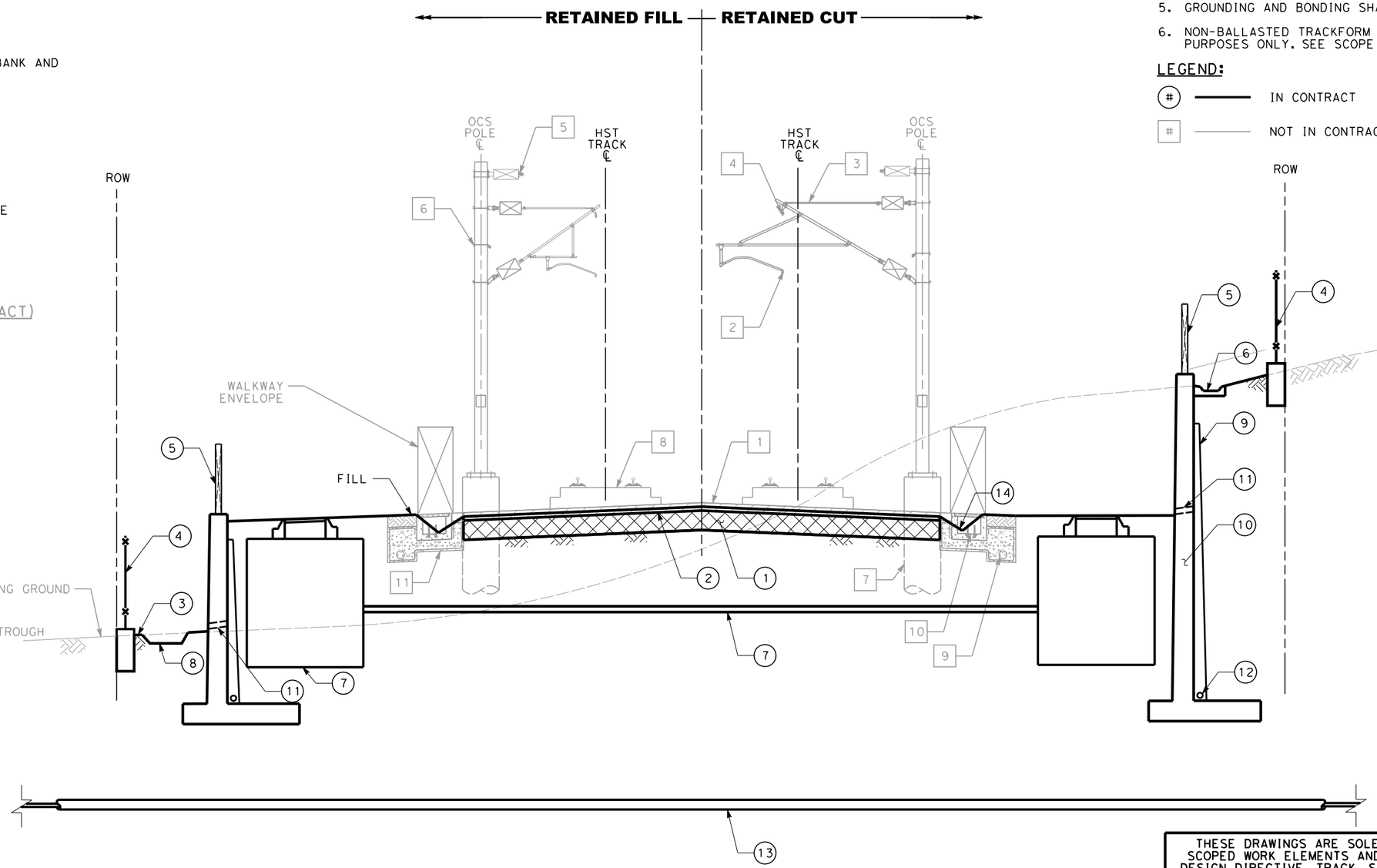
NOTES:

1. SEE DESIGN CRITERIA MANUAL, DIRECTIVE DRAWINGS, AND STANDARD DRAWINGS FOR REQUIREMENTS AND DIMENSIONS.
2. TEMPORARY DRAINAGE SHALL BE PROVIDED.
3. PROTECTIVE LAYER TO PROTECT PREPARED SUBGRADE.
4. INTRUSION BARRIER (AS REQUIRED) ADJACENT TO ROADWAYS AND RAILWAY.
5. GROUNDING AND BONDING SHALL BE PROVIDED.
6. NON-BALLASTED TRACKFORM SHOWN FOR ILLUSTRATION PURPOSES ONLY. SEE SCOPE OF WORK.

LEGEND:

(#) —— IN CONTRACT

[#] —— NOT IN CONTRACT



TYPICAL RETAINED CUT AND FILL SECTION

DATE: 12/18/2013

THESE DRAWINGS ARE SOLELY FOR THE PURPOSE OF SCOPED WORK ELEMENTS AND ARE NOT INTENDED AS A DESIGN DIRECTIVE. TRACK, SYSTEMS, AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN. ACCORDINGLY THE INFORMATION CONTAINED HEREIN SHALL NOT BE USED FOR DESIGN AND\OR CONSTRUCTION PURPOSES. OTHERWISE, REFER TO SCOPE OF WORK AND TECHNICAL DIRECTIVES.

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

PARSONS BRINCKERHOFF

CALIFORNIA HIGH-SPEED TRAIN PROJECT

ATTACHMENT 3 - SCOPING TYPICAL SECTIONS

RETAINED CUT AND FILL
WITH CLOSED DRAINAGE
SOW-CP02-03_002

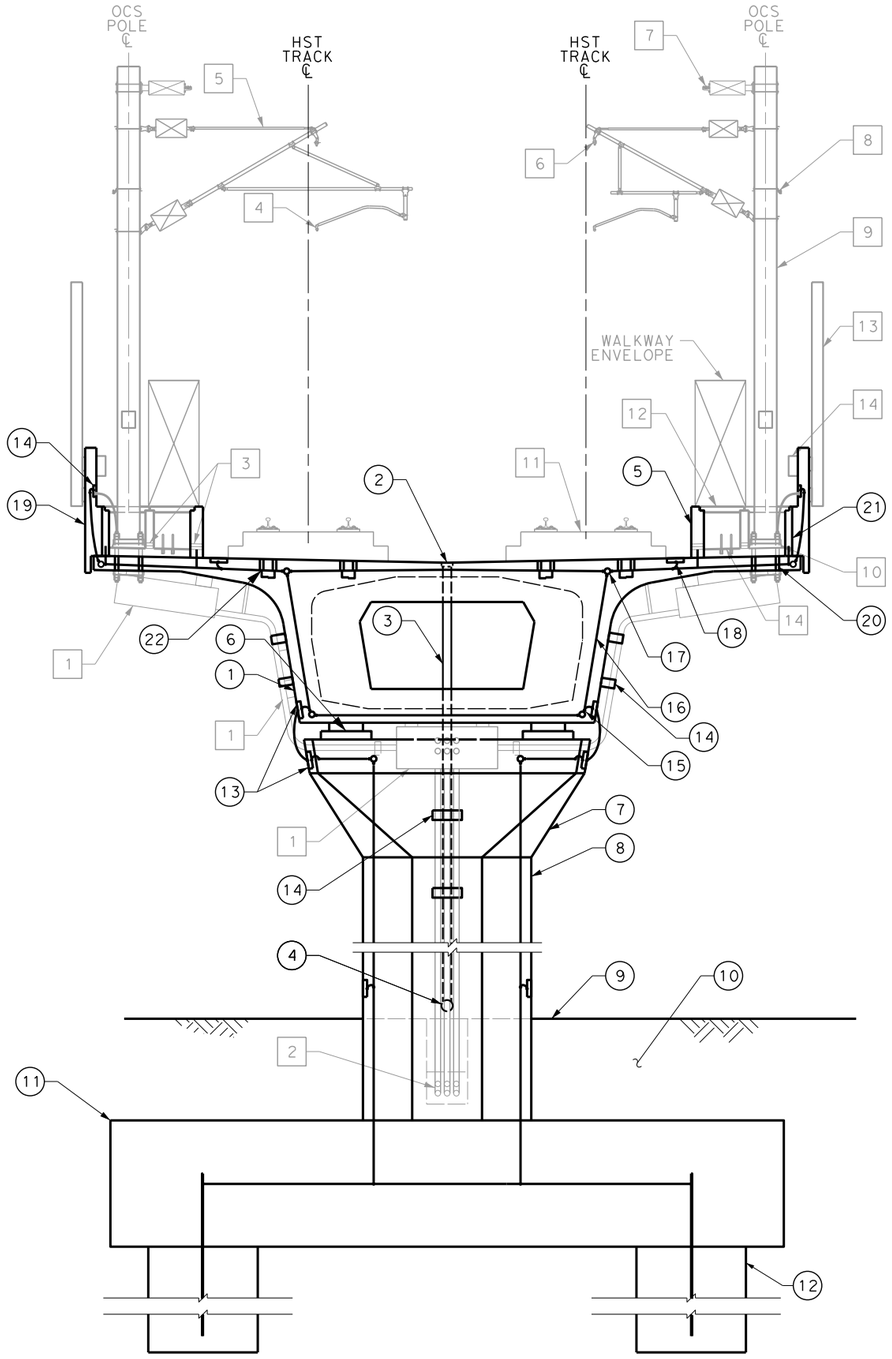
04/02/2014 - RFP No.: HSR 13-57

WORK ELEMENTS (IN CONTRACT)

1. BOX GIRDER
2. DRAIN AND INLET
3. DOWNSPOUT
4. DOWNSPOUT CONNECTION TO STORM DRAIN
5. TRACKSIDE CABLE TROUGH WALL
6. BEARINGS, RESTRAINER, TIE-DOWN DEVICE
7. COLUMN CAP
8. COLUMN
9. FINISHED GRADE
10. COMPACTED BACKFILL / STRUCTURAL FILL
11. FOOTING/PILE CAP
12. PILE/DRILLED SHAFT
13. THICK COPPER GROUNDING PLATE (SEE NOTE 4)
14. EMBEDMENTS FOR CONDUIT RISERS
15. EXOTHERMIC WELD (SEE NOTE 4)
16. CONNECTING BONDING REBAR (SEE NOTE 4)
17. LONGITUDINAL BONDING REBAR (SEE NOTE 4)
18. GROUND JUMPER CONDUCTOR (SEE NOTE 4)
19. CONCRETE PARAPET
20. SLEEVES FOR OCS POLE FOUNDATION
21. CABLE TROUGH WALL
22. SHEAR CONNECTOR OR REINFORCEMENT IN CONCRETE SLAB

WORK ELEMENTS (NOT IN CONTRACT)

1. EXPOSED CONDUITS, SURFACE MOUNTED PULL BOXES, AND MOUNTING HARDWARE
2. CONDUITS CONTINUED TO SITE LIMITS OF JOB SITE AND/OR ADJACENT CORE SYSTEMS TRACKSIDE FACILITY (SEE NOTE 3)
3. SLEEVES FOR DRAINAGE OR CONDUITS
4. CONTACT WIRE
5. OCS ASSEMBLY
6. MESSENGER WIRE
7. NEGATIVE FEEDER WIRE
8. STATIC WIRE
9. OCS POLE
10. OCS POLE FOUNDATION
11. TRACKFORM (SEE NOTE 6)
12. PRECAST COVERS
13. SOUND WALL
14. CABLE TROUGH (TYP)



TYPICAL AERIAL STRUCTURE SECTION

NOTES:

1. SEE DESIGN CRITERIA MANUAL, DIRECTIVE DRAWINGS, AND STANDARD DRAWINGS FOR REQUIREMENTS AND DIMENSIONS.
2. DOWELS FOR FUTURE CABLE THROUGH SHALL PROVIDE THE CONTINUITY FOR THE GROUNDING SYSTEM.
3. WHERE THE CORE SYSTEMS TRACKSIDE FACILITY IS WITHIN THE AUTHORITY ROW, THE CIVIL CONTRACTOR SHALL EXTEND THE UNDERGROUND DUCT BANK TO THE FACILITY'S SITE LIMITS. IN THE CASE WHERE THE FACILITIES ARE LOCATED A DISTANCE FROM THE AUTHORITY ROW, THE CIVIL CONTRACTOR SHALL EXTEND TO THE UNDERGROUND DUCT BANK TO THE JOB SITE LIMITS.
4. GROUNDING AND BONDING SHALL BE PROVIDED.
5. FENCE SHALL BE PROVIDED ALONG THE AUTHORITY ROW (NOT SHOWN).
6. NON-BALLASTED TRACKFORM SHOWN FOR ILLUSTRATION PURPOSES ONLY. SEE SCOPE OF WORK.

LEGEND:

(#) —— IN CONTRACT

[#] —— NOT IN CONTRACT

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DATE: 06/30/2014

RFP No.: 13-57 – Addendum No. 3 - 07/31/2014

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

PARSONS BRINCKERHOFF

CALIFORNIA HIGH-SPEED TRAIN PROJECT

ATTACHMENT 3 - SCOPING TYPICAL SECTIONS

AERIAL STRUCTURE

SOW-CP02-03_003

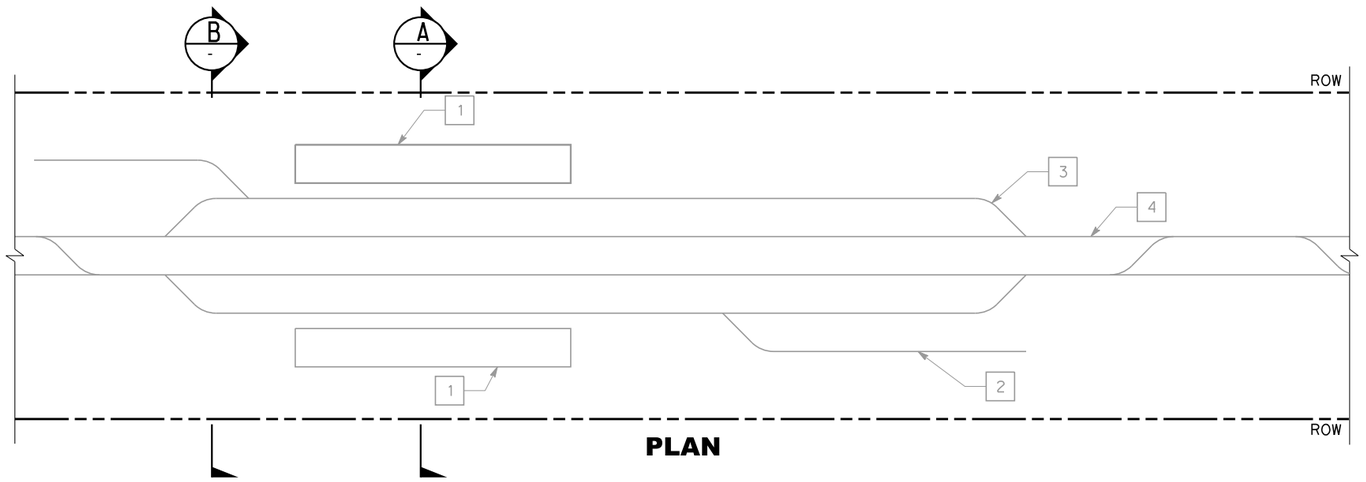
WORK ELEMENTS (IN CONTRACT)

1. BOX GIRDER
2. DRAIN AND INLET
3. DOWNSPOUT
4. DOWNSPOUT CONNECTION TO STORM DRAIN
5. TRACKSIDE CABLE TROUGH WALL
6. CABLE TROUGH WALL
7. SLEEVES FOR OCS POLE FOUNDATION AND EMBEDDED COUPLERS FOR WIND SCREENS
8. COLUMN
9. FINISHED GRADE
10. COMPACTED BACKFILL / STRUCTURAL FILL
11. FOOTING/PILE CAP
12. PILE/DRILLED SHAFT
13. THICK COPPER GROUNDING PLATE (SEE NOTE 4)
14. EMBEDMENTS FOR CONDUIT RISERS
15. EXOTHERMIC WELD (SEE NOTE 4)
16. CONNECTING BONDING REBAR (SEE NOTE 4)
17. LONGITUDINAL BONDING REBAR (SEE NOTE 4)
18. GROUND JUMPER CONDUCTOR (SEE NOTE 4)

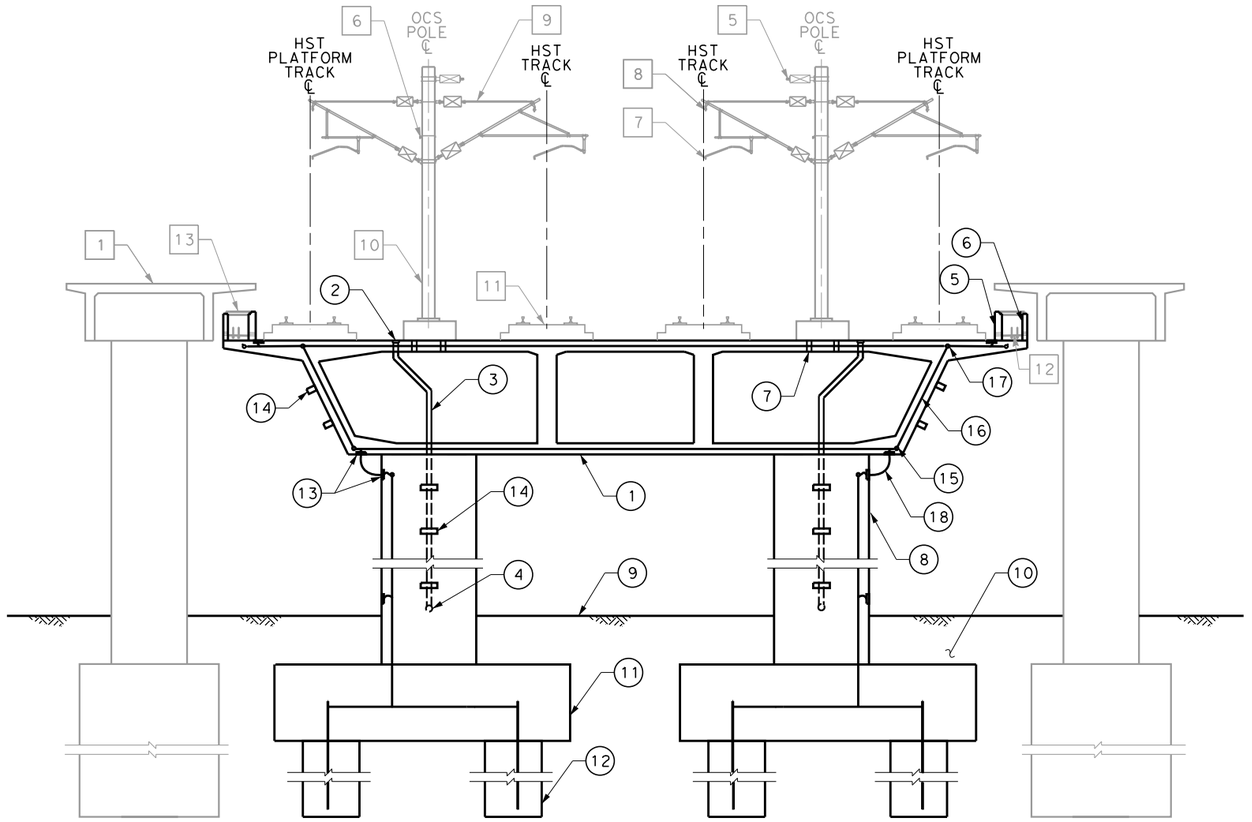
WORK ELEMENTS (NOT IN CONTRACT)

1. STATION PLATFORM
2. REFUGE/STORAGE TRACK (TYP)
3. PLATFORM TRACK (TYP)
4. MAIN TRACK (TYP)
5. NEGATIVE FEEDER WIRE
6. STATIC WIRE
7. CONTACT WIRE
8. MESSENGER WIRE
9. OCS ASSEMBLY
10. OCS POLE AND FOUNDATION
11. TRACKFORM
12. CABLE TROUGH (TYP)
13. PRECAST COVERS

DATE: 12/18/2013



PLAN



SECTION A -
NO SCALE

NOTES:

1. SEE DESIGN CRITERIA MANUAL, DIRECTIVE DRAWINGS, AND STANDARD DRAWINGS FOR REQUIREMENTS AND DIMENSIONS.
2. DOWELS FOR FUTURE CABLE THROUGH SHALL PROVIDE THE CONTINUITY FOR THE GROUNDING SYSTEM.
3. WHERE THE CORE SYSTEMS TRACKSIDE FACILITY IS WITHIN THE AUTHORITY ROW, THE CIVIL CONTRACTOR SHALL EXTEND THE UNDERGROUND DUCT BANK TO THE FACILITY'S SITE LIMITS. IN THE CASE WHERE THE FACILITIES ARE LOCATED A DISTANCE FROM THE AUTHORITY ROW, THE CIVIL CONTRACTOR SHALL EXTEND TO THE UNDERGROUND DUCT BANK TO THE JOB SITE LIMITS.
4. GROUNDING AND BONDING SHALL BE PROVIDED.
5. FENCE SHALL BE PROVIDED ALONG THE AUTHORITY ROW (NOT SHOWN).

LEGEND:

(#) ——— IN CONTRACT

[#] ——— NOT IN CONTRACT

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04/02/2014 - RFP No.: HSR 13-57

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

PARSONS BRINCKERHOFF

CALIFORNIA HIGH-SPEED TRAIN PROJECT

ATTACHMENT 3 - SCOPING TYPICAL SECTIONS

AERIAL STRUCTURE
AT STATION PLATFORM
SOW-CP02-3_004

WORK ELEMENTS (IN CONTRACT)

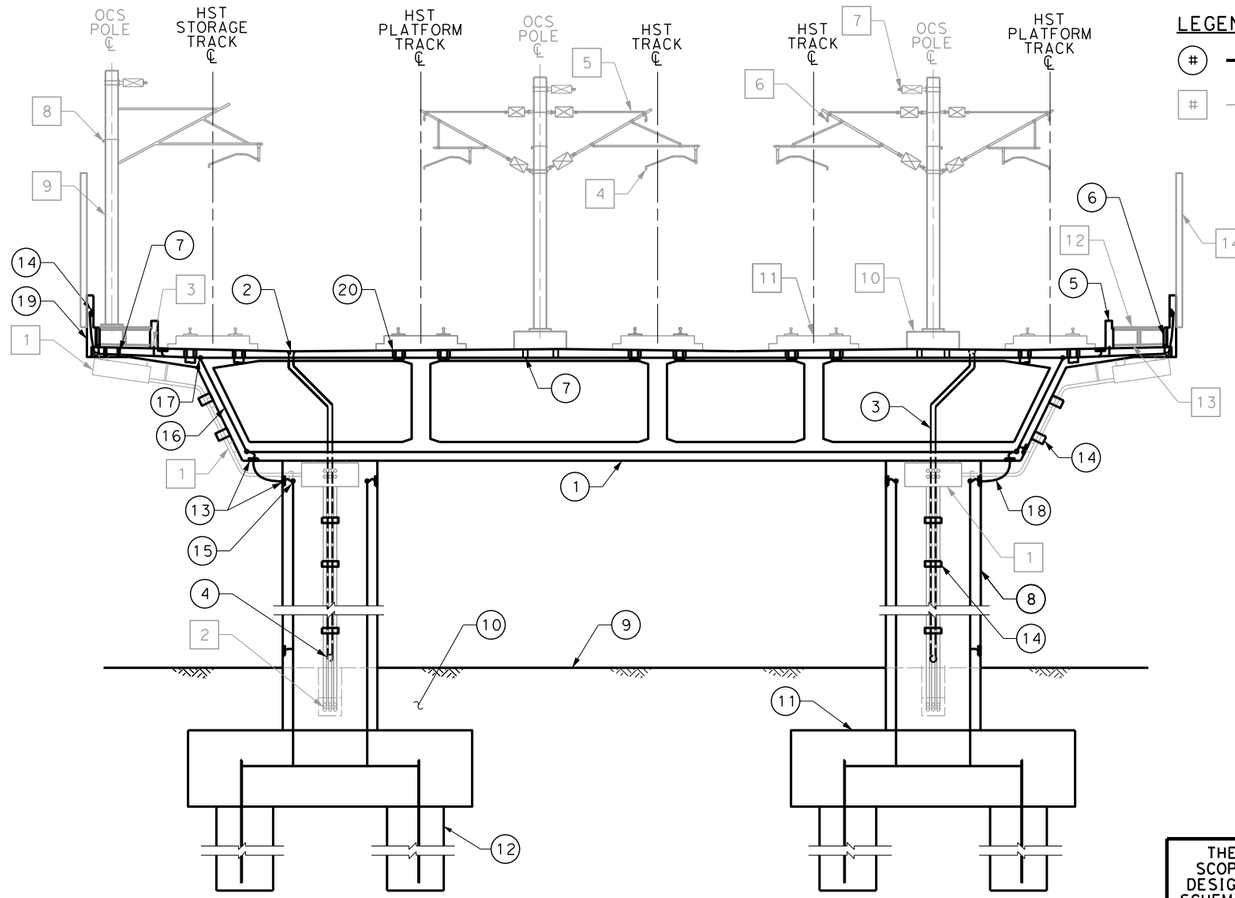
1. BOX GIRDER
2. DRAIN AND INLET
3. DOWNSPOUT
4. DOWNSPOUT CONNECTION TO STORM DRAIN
5. TRACKSIDE CABLE TROUGH WALL
6. CABLE TROUGH WALL
7. SLEEVES FOR OCS POLE FOUNDATION
8. COLUMN
9. FINISHED GRADE
10. COMPACTED BACKFILL / STRUCTURAL FILL
11. FOOTING/PILE CAP
12. PILE/DRILLED SHAFT
13. THICK COPPER GROUNDING PLATE (SEE NOTE 4)
14. EMBEDMENTS FOR CONDUIT RISERS
15. EXOTHERMIC WELD (SEE NOTE 4)
16. CONNECTING BONDING REBAR (SEE NOTE 4)
17. LONGITUDINAL BONDING REBAR (SEE NOTE 4)
18. GROUND JUMPER CONDUCTOR (SEE NOTE 4)
19. CONCRETE PARAPET
20. SHEAR CONNECTOR OR REINFORCEMENT IN CONCRETE SLAB

WORK ELEMENTS (NOT IN CONTRACT)

1. EXPOSED CONDUITS, SURFACE MOUNTED PULL BOXES, AND MOUNTING HARDWARE
2. CONDUITS CONTINUED TO SITE LIMITS OF JOB SITE AND/OR ADJACENT CORE SYSTEMS TRACKSIDE FACILITY (SEE NOTE 3)
3. SLEEVES FOR DRAINAGE OR CONDUITS
4. CONTACT WIRE
5. OCS ASSEMBLY
6. MESSENGER WIRE
7. NEGATIVE FEEDER WIRE
8. STATIC WIRE
9. OCS POLE
10. OCS POLE FOUNDATION
11. TRACKFORM
12. PRECAST COVERS
13. CABLE TROUGH (TYP)
14. SOUNDWALL

NOTES:

1. SEE DESIGN CRITERIA MANUAL, DIRECTIVE DRAWINGS, AND STANDARD DRAWINGS FOR REQUIREMENTS AND DIMENSIONS.
2. DOWELS FOR FUTURE CABLE THROUGH SHALL PROVIDE THE CONTINUITY FOR THE GROUNDING SYSTEM.
3. WHERE THE CORE SYSTEMS TRACKSIDE FACILITY IS WITHIN THE AUTHORITY ROW, THE CIVIL CONTRACTOR SHALL EXTEND THE UNDERGROUND DUCT BANK TO THE FACILITY'S SITE LIMITS. IN THE CASE WHERE THE FACILITIES ARE LOCATED A DISTANCE FROM THE AUTHORITY ROW, THE CIVIL CONTRACTOR SHALL EXTEND TO THE UNDERGROUND DUCT BANK TO THE JOB SITE LIMITS.
4. GROUNDING AND BONDING SHALL BE PROVIDED.
5. FENCE SHALL BE PROVIDED ALONG THE AUTHORITY ROW (NOT SHOWN).



SECTION B
NO SCALE -

LEGEND:

(#) ——— IN CONTRACT

——— NOT IN CONTRACT

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DATE: 06/30/2014

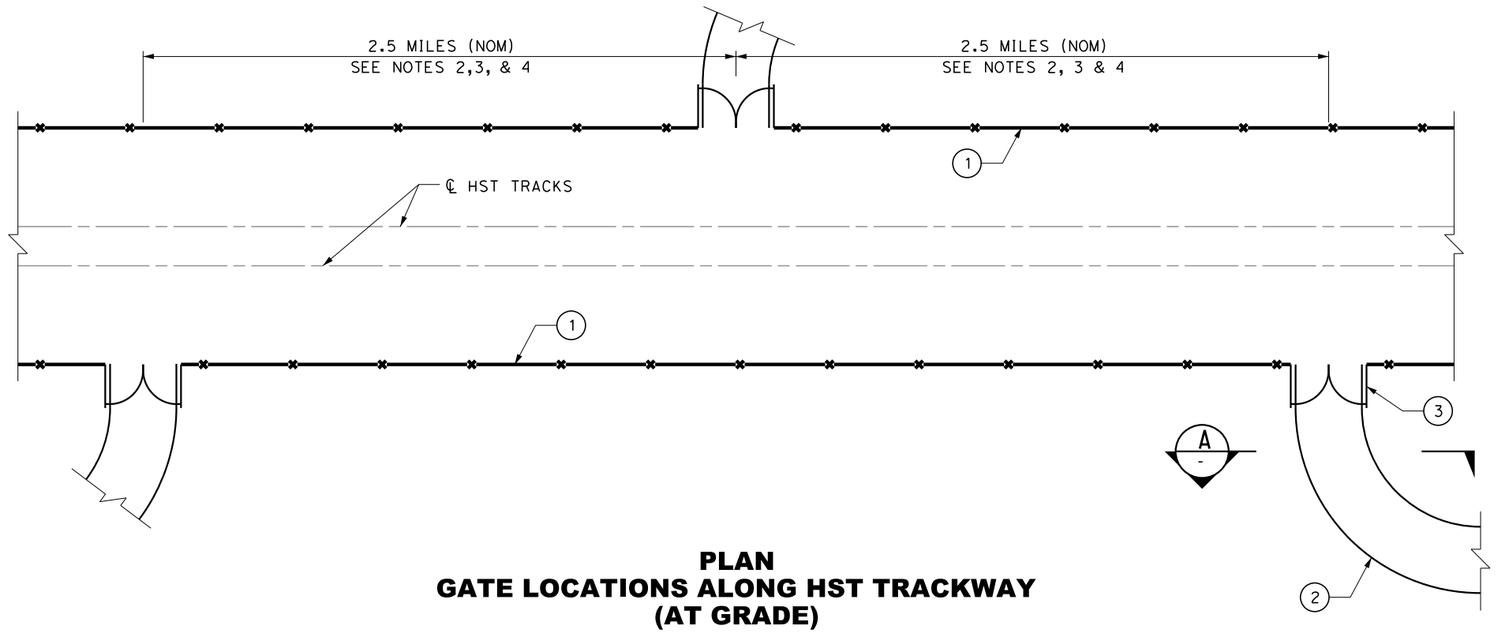
RFP No.: 13-57 – Addendum No. 3 - 07/31/2014

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

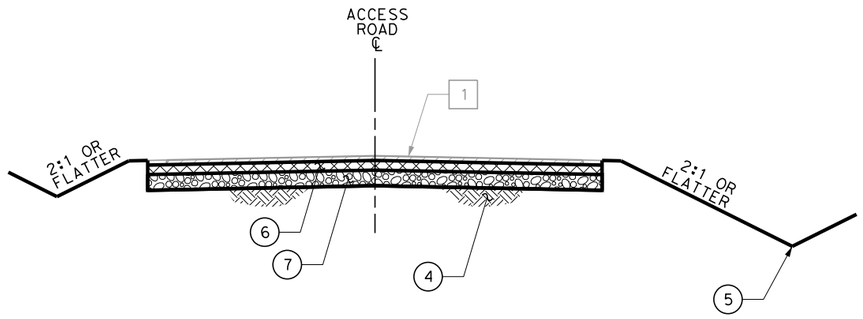
PARSONS BRINCKERHOFF

CALIFORNIA HIGH-SPEED TRAIN PROJECT
ATTACHMENT 3 - SCOPING TYPICAL SECTIONS

AERIAL STRUCTURE
AT STATION APPROACH
SOW-CP02-03_005



PLAN
GATE LOCATIONS ALONG HST TRACKWAY
(AT GRADE)



SECTION A -

ACCESS ROAD

DATE: 12/18/2013

NOTES:

1. SEE DESIGN CRITERIA MANUAL, DIRECTIVE DRAWINGS, AND STANDARD DRAWINGS FOR REQUIREMENTS AND DIMENSIONS.
2. LOCATION OF GATES ALONG AUTHORITY ROW AND FENCING REQUIRES COORDINATION WITH THE LOCAL FIRE PROTECTION AGENCY AND EMERGENCY RESPONDERS.
3. GATES LOCATIONS SHALL BE COORDINATED WITH (I/E. PLACED ADJACENT TO OR NEAR) THE LOCATION OF HST WAYSIDE FACILITIES REQUIRING ACCESS FROM OUTSIDE AUTHORITY ROW.
4. IN GENERAL VEHICULAR ACCESS GATE ALONG AT-GRADE TRACKWAY, SHALL BE LOCATED NOMINALLY AT 2.5 MILE INTERVALS.
5. ACCESS ROADS TO BE GRADE AND GRAVEL ONLY LOCATED AT 2.5 MILE NOMINAL INTERVALS TO COINCIDE WITH VEHICULAR GATE ACCESS.

WORK ELEMENTS (IN CONTRACT)

1. FENCE
2. ACCESS ROAD
3. VEHICULAR ACCESS GATE
4. COMPACTED SUBGRADE OR UNDISTURBED EARTH (SEE NOTE 5)
5. DRAINAGE DITCH (TYP)
6. AGGREGATE BASE
7. AGGREGATE SUBBASE

WORK ELEMENTS (NOT IN CONTRACT)

1. ASPHALT CONCRETE

LEGEND:

(#) —— IN CONTRACT

—— NOT IN CONTRACT

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04/02/2014 - RFP No.: HSR 13-57

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

PARSONS BRINCKERHOFF

CALIFORNIA HIGH-SPEED TRAIN PROJECT
ATTACHMENT 3 - SCOPING TYPICAL SECTIONS

ACCESS ROAD
SOW-CP02-03_006